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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/078,074	02/14/2002	Seuk Hwan Chung	2598/OK282	6861

7590 06/29/2005

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EXAMINER

DABNEY, PHYLESHA LARVINIA

ART UNIT	PAPER NUMBER
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2646

DATE MAILED: 06/29/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/078,074

Applicant(s)

CHUNG, SEUK HWAN

Examiner

Phylesha L. Dabney

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 March 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

This action is in response to the response received on 16 March 2005 in which claims 1-30 are pending.

Terminal Disclaimer

The terminal disclaimer filed on 3/16/05 disclaiming the terminal portion of any patent granted on this application which would extend beyond the expiration date of 10/005264 (Publication No. 20030044031) has been reviewed and is accepted. The terminal disclaimer has been recorded.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-30 are rejected under 35 U.S.C. 102(e) as being anticipated by Kim (U.S. Patent No. 6,611,605).

The applied reference has a common assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the

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inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

Regarding claims 1-12, as shown in figures 1-7, Kim teaches a multi-functional actuator comprising: a housing (10, 60) having an internal space and a groove in the inner side; a sound-generating diaphragm (22) with an outer end fixed to the upper end of the housing; a voice coil (24) fixed to the bottom of the diaphragm; a vertically magnetized magnet (44); an upper plate (42) attached to the magnet for forming a magnet circuit; a yoke (46) for forming the magnetic circuit together with the magnet; a weight (47, 54) for defining a vibration body together with the yoke; an inherent leaf spring (30) fixed into the grooves of the housing and having a portion of curvature; and a vibrating coil (70) installed in the housing for generating vibration using a magnetic flux formed in a magnetic system.

Regarding claims 13-21, as shown in figures 1-7, Kim teaches a housing (10, 60) having an internal space in the inner side; a coil (70) installed in the housing; a magnet (44); a yoke (46) for forming the magnetic circuit together with the magnet; and inherently at least one leaf spring (30) fixed in the housing and having a portion of curvature.

Regarding claims 22-30, as shown in figures 1-7, Kim teaches a housing (10, 60) having an internal space in the inner side; a sound-generating diaphragm (22) with an outer end fixed to the upper end of the housing; a coil (24) fixed to the bottom of the diaphragm; a magnet (44); a yoke (46) for forming the magnetic circuit together with the magnet; and inherently at least one leaf spring (30) fixed in the housing and having a portion of curvature.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 9-10, 18-19, 27-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kim.

Regarding claims 9, 18, and 27, Kim does not teach the bending portion of the leaf spring is waved. However, the examiner takes official notice that it is known to construct leaf springs in any configuration including wavy for beneficially enhancing the endurance property of the spring. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to construct the leaf spring of Kim in any configuration including wavy for beneficially enhancing the endurance property of the spring.

Regarding claims 10, 19, and 27, Kim does not teach the bending portion of the leaf spring is sharp shaped. However, the examiner takes official notice that it is known to construct leaf springs in any configuration including sharp shaped for beneficially enhancing the endurance property of the spring. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to construct the leaf spring of Kim in any configuration including sharp shaped for beneficially enhancing the endurance property of the spring.

Response to Arguments

Applicant's arguments have been fully considered but they are not persuasive.

In response to applicant's argument that the Kim reference does not teach a "portion of curvature", the examiner disagrees. As clearly shown in figure 3, the Kim reference teaches a rounded or curved leaf spring which satisfies the claimed limitation.

In response to the applicant's argument that Kim reference does not teach the problem of deformation from dropping of the actuator. Applicant has argued limitations that are not found in any claims.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Phylesha L. Dabney whose telephone number is 571-272-7494. The examiner can normally be reached on Mondays, Tuesdays, Wednesdays, Fridays 8:30-4 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sinh Tran can be reached on 571-272-7564. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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SINH TRAN
SUPERVISORY PATENT EXAMINER